Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Jacks Fork River

Waterbody Segment at a Glance:

County: Shannon
Nearby Cities: Eminence
Length of impairment: 7 miles
Pollutant: Fecal Coliform
Source: Organic Wastes

The length of impairment is proposed to change from 5 to 7 miles on the 2002 303(d) list

TMDL Priority Ranking: Medium


State map showing location of watershed

Description of the Problem

Beneficial uses of Jacks Fork River

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life and Human Health associated with Fish Consumption
- Cool Water Fishery
- Whole Body Contact Recreation (Swimming)
- Boating and Canoeing

Use that is impaired

- Whole Body Contact Recreation (Swimming)

Standards that apply

- Missouri's Water Quality Standards (WQS) at 10 CSR 20-7.031(4)(C) state that the fecal coliform count shall not exceed 200 bacterial colonies per 100 milliliters of water during the recreational season (April 1-October 31) in waters designated for whole-body contact recreation.
- Anti-degradation Policy – The Jacks Fork is an Outstanding Natural Resource Water, which is classified in the WQS under "Tier Three Waters" (10 CSR 20-7.031(2)(C)). For these waters, no degradation of water quality is allowed. That means that whatever fecal coliform occurs naturally in the river is the "natural background" and it then becomes the standard for the Jacks Fork.

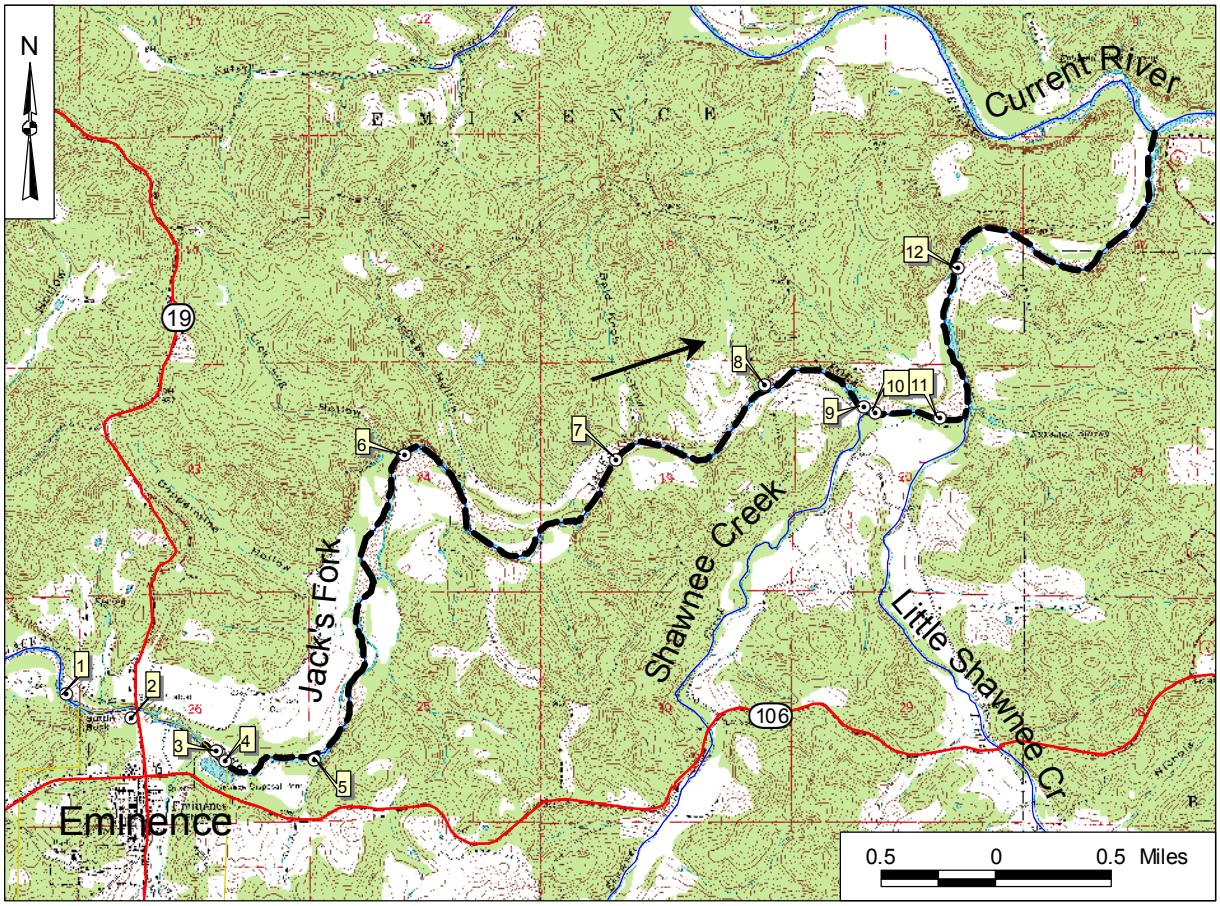
The Jacks Fork River is part of the Ozark National Scenic Riverways, which also includes the Current River and Eleven Point River. Jacks Fork is a major recreation resource and is used for canoeing, fishing, swimming and trail rides. A five-mile stretch of the river was placed on the 1998 303(d) list of impaired waters for excess fecal coliform bacteria. Fecal coliform are non-pathogenic (do not cause human illness) bacteria that are used as indicators of the risk of waterborne disease from bacteria or viruses. They are used to detect fecal contamination of the water by humans or other warm-blooded animals. From 1999 through 2002, U.S. Geological Survey conducted bacterial tests at many sites in

and around the impaired portion of Jacks Fork. Due to data from this and other studies, the length of impairment was changed to seven miles on the proposed 2002 303(d) list.

The TMDL was completed in the fall of 2003. Based on background levels of fecal coliform, the target in the TMDL was set for a geometric mean of 25 col/100 mL. A geometric average, also referred to as a geomean, provides a better indication of what is actually occurring in the river. It reduces the impact of infrequent, high bacteria counts on the final result. To achieve this target, the Jacks Fork Watershed Committee has been formed. Participants are local citizens who have volunteered to identify and implement strategies to bring the river back into compliance with WQS. Some of the approaches the partnership has discussed include:

- Addressing on-site septic system concerns through education and data collection
- Educate recreational users about river etiquette and actions individuals can take to protect water quality through publications and displays
- Ensuring toileting facilities on the river are available and easily accessible
- Reducing the amount of time trail riders spend directly in the stream and appropriate management of horse manure
- Improvement of trails in the watershed to prevent erosion and runoff

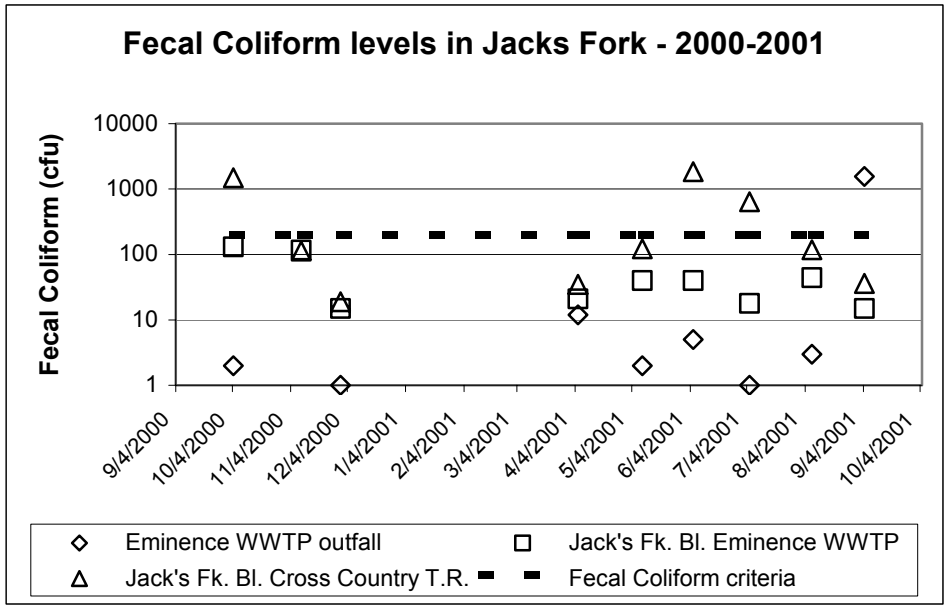
Map of Jacks Fork River Fecal Coliform Sampling Sites



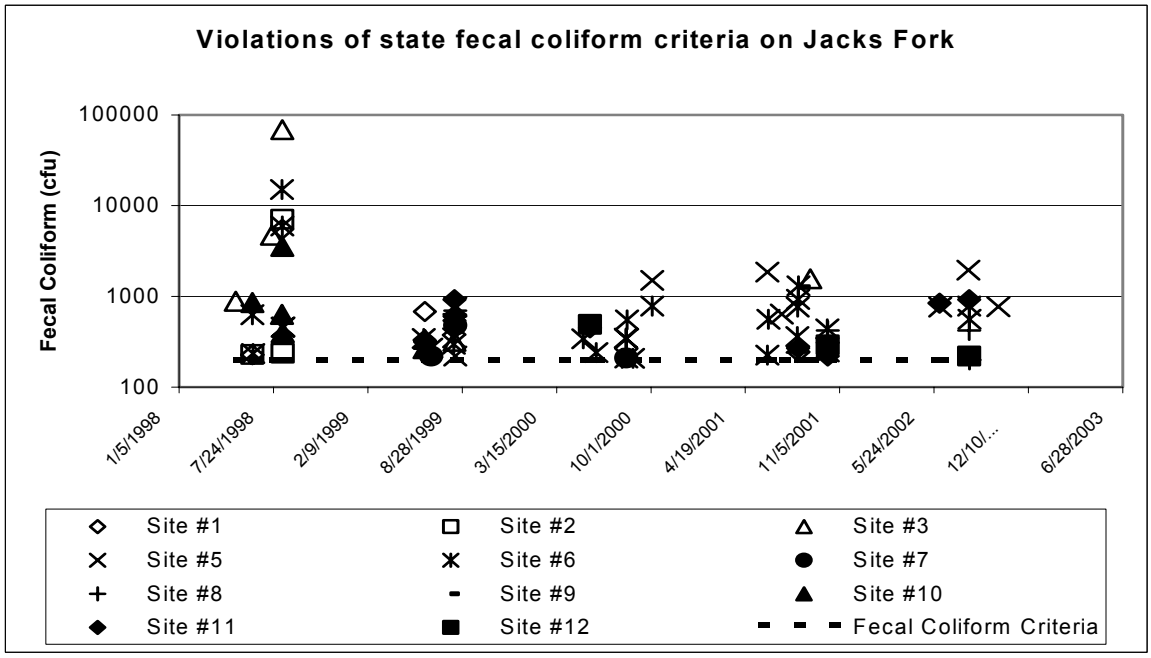
Impaired Segment Direction of Flow

Sample Site Index

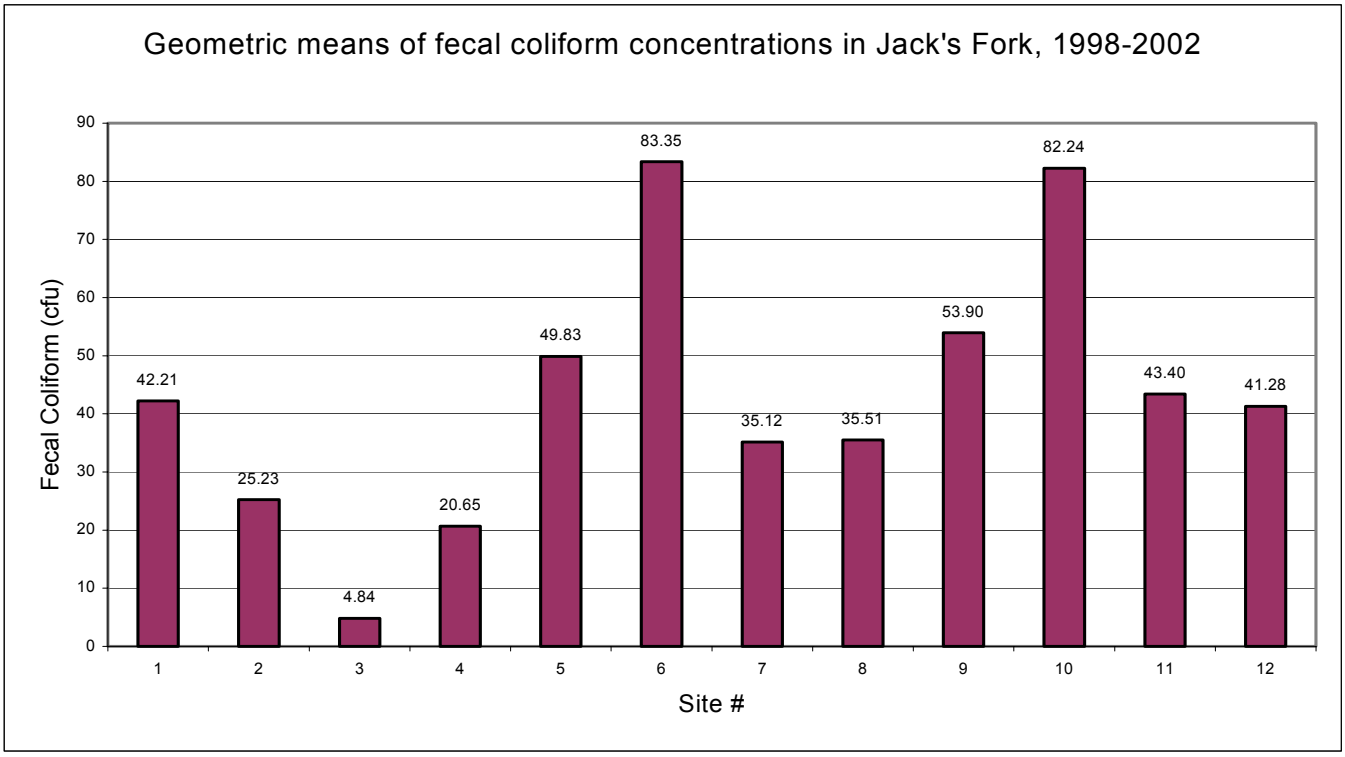
1- Jacks Fork below Story Creek
2- Jacks Fork in Eminence at Highway 19
3- Eminence WWTP outfall
4- Jacks Fork below Eminence WWTP
5- Jacks Fork below Cross Country Trail Rides
6- Jacks Fork above Lick Log Hollow
7- Jacks Fork above Bald Knob Hollow
8- Jacks Fork above Powell Spring
9- Jacks Fork above Shawnee Creek
10- Jacks Fork below Shawnee Creek
11- Jacks Fork above Little Shawnee Creek
12- Jacks Fork below Little Shawnee Creek



Sources: Missouri Department of Natural Resources and Missouri Department of Health and Senior Services



Sources: Missouri Department of Natural Resources, United States Geological Survey, United States National Park Service



Sources: Missouri Department of Natural Resources, United States Geological Survey, United States National Park Service

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